

REMARKS

Claims 1-13 are pending; claims 1-10 have been amended and claims 11-13 have been added.

We have enclosed an English translation of Form PCT/IPEA/409 as requested by the examiner.

Claim 12 has been added to emphasize that the heart of the invention is the amount of heat input to the polymer coating. By adjusting the heat input, the release rate of the CR granules in the soil can be controlled, i.e. increasing the rate within the claimed range leads to increased release rates.

This claim is supported, *inter alia*, on page 1, line 45, to page 2, line 3; page 55, lines 26-33 and Table 14b on page 57. Claim 13 is supported by Table 14b and page 1, lines 5-9.

The rejections under 35 USC § 112, second paragraph, are believed to have been overcome by amendment to claims 1 and 9. The phrase in claim 9, i.e. "to act on plants, their environment or on seed" has been changed to "comprises applying the CR granules of claim 1 to the soil, which contains or will contain seeds or plants." Support for the language can be found on page 31, lines 14 -24.

Claim 10 was rejected under 35 USC § 112, first paragraph, on the basis that:

"One of ordinary skill in art of soil application of granules, would not know what pests could be controlled, and what is meant by control, with allowance of action of any of the unspecified active containing granules of

claim 1, allowed to act as per claim 10."

Control or controlling has its ordinary meaning in this art, i.e., prevention of the flourishing of something undesirable, which is also a dictionary meaning (*Random House Webster's College Dictionary*, Random House, N.Y., 2000, page 291, copy enclosed). The term is common in the art as confirmed by Sauer et al. (see Abstract and page 15, lines 16-18). The pests to be controlled are stated in the claim, i.e., phytopathogenic fungi, undesired vegetation, and undesired insects. The active ingredients in the CR granules are known in the art or are ones, which can control the recited undesirables. This person would also be aware that active ingredients which have the ability to control the recited undesirables are included within the claims. The specification includes many examples of such active-ingredients known to control the specified undesirables.

It would appear that the examiner is questioning the "enablement" in his specific objections to the claim under 35 USC § 112, first paragraph, not the description requirement as indicated in the initial sentence of this rejection.

"The test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosure in the patent coupled with information known in the art without undue experimentation". MPEP 2164.01. It is believed that this art, e.g., Sauer et. al. (CA 2178655), and the specification provide ample means for carrying out the invention without undue experimentation. Even the examiner implicitly

acknowledges that the pests to be controlled and suitable pesticides are well known in the art of CR granules for soil application (page 6, third paragraph of office action). Thus, once of ordinary skill in the art would know the pests to be controlled by the active-ingredient granules.

Claims 1-3 and 8-10 stand rejected as anticipated under 35 USC § 102 (b) by Sauer et al. (CA 2178655).

Contrary to the examiner's conclusion there is no evidence that "the same coating in the same equipment by the same method as is instantly claimed" was performed by Sauer et al.

The claimed process requires that the inlet air temperature and the outlet air temperature, the gas volume flow, total sample residence time and amount of polymer in the batch be known and correlated in order to produce the CR granules (page 57, lines 16-25). It requires all these parameters to calculate the claimed heat input values.

The only parameters identified by examples 1 and 9 are the inlet temperatures, possibly the sample residence time and amount of polymer in the batch. There is no way of knowing what the heat input to the polymer coating is in these or any of the other examples of Sauer et al. since the outlet temperatures and the gas volume flow are not given and cannot be calculated from the available data. Thus, the "same method" is not taught by the reference. Thus, the claimed process is not anticipated by Sauer et al.

As for the product claims, Sauer et al. gives no indication in the examples as to the release rate of the CR granules. The claimed products have release rates that are correlated with the heat inputs of the polymer coating (Table 14b). Thus, there is no evidence that the CR granules in the examples of Sauer et al. anticipate these claims.

Claims 1-3 and 8-10 stand rejected as being unpatentable over Sauer et al. in view of Rei (US4,663,359) or Arnold (EPO58256).

The inclusion of Rei and Arnold do not make up for the deficiencies of Sauer et al. since they do not even prepare CR granules, much less CR granules by a fluidized bed process.

As discussed in the previous rejection the art does not disclose CR granules prepared by the claimed method which inherently have a release rate that is correlated with the heat impact to the polymer coating. The claimed process is also not taught or suggested by Sauer et al. since the reference (1) does not disclose the claimed heat input range (2) does not furnish sufficient details to calculate the heat input and (3) does not teach that the release rate of the CR granules can be controlled by operating at a heat input to the polymer coating of from 6,000 to 5,000 kJ/kg.

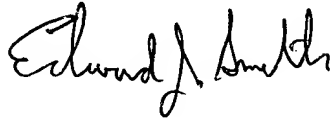
In view of the above amendments and comments it is believed that the claims are in condition for allowance. Such action by the examiner is respectfully solicited.

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees to Deposit Account No. 11-0345. Please credit

any excess fees to such deposit account.

Respectfully submitted,

KEIL & WEINKAUF

A handwritten signature in black ink, appearing to read "Edward J. Smith". The signature is written in a cursive, flowing style.

Edward J. Smith
Reg. No. 24,070

1350 Connecticut Ave., N.W.
Washington, D.C. 20036
(202)659-0100

EJS/sb/kas

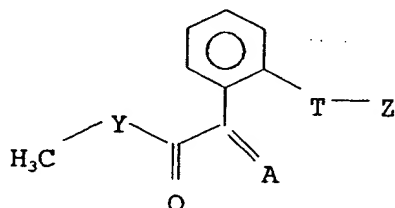
VERSION WITH MARKINGS TO SHOW CHANGES MADE

Amend claims 1-10 and add new claims 11-13 as follows:

1. (amended) Controlled release (CR) [Soil-applied CR] granules [obtainable] for soil-application obtained by applying an active-ingredient-comprising coating to a solid carrier in a fluidized bed with a defined heat input adjustable to 6000 to 25,000 kJ/kg [KJ/KG] of coating polymer.
2. (amended) The [Soil-applied] CR granules of [as claimed in] claim 1 with an active-ingredient-comprising coating of
0.1-25% by weight of one or more active ingredients
1-40% by weight of one or more coating polymers
0-60% by weight of one or more additives,
the total of the % by weight of the compounds in the coatings being 100% by weight.
3. (amended) The [Soil-applied] Cr granules of [as claimed in] claim 2 comprising, as coating polymer, a dispersion from amongst the following groups: butyl acrylate/styrene copolymers, copolymer dispersions of acrylic and methacrylic esters, polyethylene wax emulsions, polyesters composed of the following units: 50 mol% dimethyl terephthalate + approx. 50 mol% adipic acid= 150 mol% 1,4-butanediol + trace elements, mixture of 10-95% polyvinyl acetate + 5-90% N-vinylpyrrolidone-comprising polymers, ethylene/methacrylic acid zinc salt.
4. (amended) The [Soil-applied] CR granules of [as claimed in] claim 3 comprising, as

coating polymer, at least one from amongst the group of the biodegradable polyesters.

5. (amended) The [Soil-applied] CR granules of [as claimed in] claim 1 comprising, as active ingredient, at least one fungicidal compound of the formula 1 from amongst the class of the strobilurins [.]



in which the substituents have the following meanings:

- A is NOCH₃, CHOCH₃, CHCH₃;
- Y is O, NH;
- T is oxygen or oxymethylene;
- Z is a group X, N=C(R¹)W or N=C(R¹)-C(R²)=NOR³;
- X is unsubstituted or substituted heterocyclyl, unsubstituted or substituted aryl, unsubstituted or substituted hetaryl;
- W is unsubstituted or substituted alkyl, unsubstituted or substituted alkenyl, unsubstituted or substituted alkynyl, unsubstituted or substituted cycloalkyl, unsubstituted or substituted cycloalkenyl, unsubstituted or

substituted heterocyclyl, unsubstituted or substituted aryl or unsubstituted or substituted hetaryl;

R¹ is hydrogen, cyano, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy, C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₆-cycloalkyl;

R² is hydrogen, cyano, halogen, C(R^d)=NOR³ or W, OW, SW or NR^cW, where

R^c is hydrogen, alkyl, alkenyl or alkynyl;

R^d is hydrogen or alkyl;

R³ is hydrogen, unsubstituted or substituted alkyl, unsubstituted or substituted alkenyl or unsubstituted or substituted alkynyl,

or a salt thereof.

6. (amended) The [Soil-applied] CR granules of [as claimed in] claim 1, comprising an active ingredient from the group of the systemically acting strobilurins, the azoles or the salicylates.
7. (amended) The [Soil-applied] CR granules of [as claimed in] claim 1, comprising, as active ingredient, S-methyl benzo[1,2,3]thiadiazole-7-carbothioate.
8. (amended) The [Soil-applied] CR granules of [as claimed in] claim 1, comprising, as carrier, water-soluble, water-insoluble or biodegradable granules.
9. (amended) A process for the preparation of [Soil-applied] the CR granules [as claimed in] of claim 1, which comprises applying, to a carrier, first the active ingredient and then the coating comprising at least one coating polymer and, [if

appropriate] optionally additives in a fluidized bed, micropores being generated in the coating by abrasion or by the direction of water-soluble additives [(lime, starch)].

10. (amended) A method for controlling phytopathogenic fungi, undesired vegetation, undesired attack by insects and/or for regulating the growth of plants, which comprises [allowing Soil-applied] applying the CR granules [as claimed in] of claim 1 to [act on plants, their environment or on seed] the soil which contains or will contain seeds or plants therein.
11. (new) The process of claim 9 wherein the coating contains lime or starch as water-soluble additives.
12. (new) In a process for the preparation of CR granules for soil-application by applying an active-ingredient-comprising polymer coating to a solid carrier in a fluidized bed, the improvement of controlling the release rate of the granules by operating at a heat input to the polymer coating of from 6000 to 25,000 kJ/kg.
13. (new) The process of claim 12 wherein the heat input is from about 8200 to about 16,000 kJ/kg.

ual agency believed to assist a medium at a séance. [1425-75; late
1E *co(u)ntrollen* (v.) < AF *contreroller* to keep a duplicate account or

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

8



Applicant's or agent's file reference 0050/049248	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP99/05407	International filing date (day/month/year) 28 July 1999 (28.07.99)	Priority date (day/month/year) 05 August 1998 (05.08.98)
International Patent Classification (IPC) or national classification and IPC A01N 25/26		
Applicant BASF AKTIENGESELLSCHAFT		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement
- VI ☒ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 15 January 2000 (15.01.00)	Date of completion of this report 05 December 2000 (05.12.2000)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP99/05407

I. Basis of the report

1. This report has been drawn on the basis of (Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)

☐ the international application as originally filed.

☒ the description, pages 1-56, as originally filed.

pages _____, filed with the demand.

pages _____, filed with the letter of _____.

pages _____, filed with the letter of _____.

☒ the claims, Nos. 1-11, as originally filed.

Nos. _____, as amended under Article 19.

Nos. _____, filed with the demand.

Nos. _____, filed with the letter of _____.

Nos. _____, filed with the letter of _____.

☐ the drawings, sheets/fig _____, as originally filed.

sheets/fig _____, filed with the demand.

sheets/fig _____, filed with the letter of _____.

sheets/fig _____, filed with the letter of _____.

2. The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/fig _____

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 99/05407

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	5, 7	YES
	Claims	1-4, 6, 8-11	NO
Inventive step (IS)	Claims		YES
	Claims	1-11	NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims		NO

2. Citations and explanations

This report makes reference to the following search report citations:

D1 WO-A-95 16350

D2 EP-A-0 868 912.

The present application refers to CR soil granules produced by applying a coating containing an active ingredient to a solid carrier in a fluidised bed with a heat supply adjustable in a defined way. It also refers to a method for producing these granules, to the use thereof and a method for controlling phytopathogenic mushrooms, undesired plant growth, undesired insect infestation and/or for regulation of plant growth.

- Examples disclosed in D1 do not directly seem to show how high the supplied heat is per kg coat polymer proportion. The use of this parameter does not generally seem to be standard in the present field. However, the range given in present Claim 1 from 6000 to 25000 kJ/kg coat polymer proportion seems to result only from the generally standard parameters such as temperature and gas speed. These parameters do not appear to differ from those

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 99/05407

disclosed in D1 (see Examples). The subject matter of present Claims 2 to 4 and 6 and 8 to 10 cannot be considered novel in view of D1 (see D1: page 6, line 4 ff.; page 4, line 43 - page 5, line 15; page 3, line 7ff). The requirement for novelty cannot thus be acknowledged for the aforementioned claims and the application does not meet the requirements of PCT Article 33(2).

2. D1 does not disclose strobilurin or granules containing the compound 1,2,3-benzthiadiazol-7-carboxylic acid-5-methyl-thioester. Present Claims 5 and 7 thus meet the requirements of PCT Article 33(2).
3. At present, it is not clear to what extent the newly considered subject matter of the claim can be considered to involve an inventive step. The requirements of PCT Article 33(3) are thus not satisfied.
4. Industrial applicability (PCT Article 33(4))

Industrial applicability is acknowledged for Claims 1 to 11.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 99/05407

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: VI

D2 was not published after the priority date of the present application but before the date of its international application. If the priority of the present application were not valid, its content would therefore be considered part of the prior art. Moreover, the applicant should note that D2 would be considered in the European procedure as prejudicial to novelty within the meaning of Article 54(3) EPC (Example 6).

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 99/05407

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. The claimed range according to Claim 1 does not appear to be supported by the explanations of the present description. In Example 12 it is only proven that a difference in the amount of heat supplied leads to different leaching rates. However, the limits of the claimed range do not appear to result directly from the experimental values since they vary only between 8282 and 16322 kJ/kg (PCT Article 6).
2. The reference to the substituents described in the citation WO/15552 (page 21, lines 24-25) is not permissible since a person skilled in the art is not thereby capable of carrying out the invention.